

The Mistaken Identity of Colicin A

S. E. LURIA

Department of Biology, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139

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In a series of published articles, colicin A has been mistakenly labeled as colicin K.

The preceding article by Brey (1) reports that the *Escherichia coli* strain labeled K235 (ColK) in our laboratory collection is in fact a colicin A producer. Colicin A from strain O6:H3,23 was used in our laboratory in 1968–1969 in a study that showed that the mode of action of colicin A was similar to that of colicins E1 and K (6). In 1971, I noted certain discrepancies between the properties of our supposed colicin K and those reported by M. Nomura. Apparently, a mistake in stock culture transfers must have occurred in 1969, the only time when a colicin A-producing strain was purposefully used in our laboratory. Some substrains from our “K235 (ColK)” culture that had been sent to other laboratories since 1972 also proved to be colicin A producers.

As a consequence, many publications from our laboratory after 1971, supposedly dealing with colicin K, presumably dealt with colicin A. Listed below (3, 5, 7, 8, 10) are articles in which the confusion of colicins may be significant. Articles 2, 4, and 9 are from other laboratories that used our mislabeled colicin, believing it was colicin K from strain K235.

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LITERATURE CITED

1. Brey, R. N. 1982. Fragmentation of colicins A and E1 by cell surface proteases. *J. Bacteriol.* **149**:306–315.
2. Hong, J.-S., D. L. Haggerty, and M. A. Lieberman. 1977. The energy coupling factor as target of colicin K: characterization of a colicin K-insensitive *ECF* mutant of *Escherichia coli*. *Antimicrob. Agents Chemother.* **11**:881–887.
3. Kayalar, C., and S. E. Luria. 1979. Channel formation by colicin K on liposomes, p. 297–306. In C. P. Lee, G. Schatz, and L. Ernster (ed.), *Membrane bioenergetics*. Addison-Wesley Publishing Co., Reading, Mass.
4. Kopecky, A. L., D. P. Copeland, and J. E. Lusk. 1975. Viability of *Escherichia coli* treated with colicin K. *Proc. Natl. Acad. Sci. U.S.A.* **72**:4631–4634.
5. Luria, S. E. 1974. Colicins, p. 293–320. In L. Leive (ed.), *Bacterial walls and membranes*. Marcel Dekker, New York.
6. Nagel de Zwaig, R. 1969. Mode of action of colicin A. *J. Bacteriol.* **99**:913–914.
7. Plate, C. A., and S. E. Luria. 1972. Stages in colicin K action, as revealed by the action of trypsin. *Proc. Natl. Acad. Sci. U.S.A.* **69**:2030–2034.
8. Plate, C. A., J. L. Sait, A. M. Jetten, and S. E. Luria. 1974. Effects of colicin K on a mutant of *Escherichia coli* deficient in $\text{Ca}^{2+}\text{Mg}^{2+}$ -activated ATPase. *J. Biol. Chem.* **249**:6138–6143.
9. Schein, S. J., B. L. Kagan, and A. Finkelstein. 1978. Colicin K acts by forming voltage-dependent channels in phospholipid bilayer membranes. *Nature (London)* **276**:159–163.
10. Weiss, M. J., and S. E. Luria. 1979. Reduction of membrane potential, an immediate effect of colicin K. *Proc. Natl. Acad. Sci. U.S.A.* **75**:2483–2487.